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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 16, 18-21, 31-33, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viens (U.S. Patent No. 5,554,094).

Viens discloses a sheet folding apparatus comprising a sheet folding unit which applies at least letter folding on a sheet (Figs. 1, 2-4, 5A, 5B, and 6A); an auto folding mode selecting device (via folding station 12 and a computer processing unit including two keyboard/monitor units 14A and 14B; column 4, lines 24-27) which selectively causes the sheet folding unit to operate in one of a plurality of folding modes including at least letter C-folding, letter Z-folding, and Z-folding (Figs. 1-4; column 4, lines 40-44 and 61-64 and column 2, lines 21-23; via the different types folds accomplished by folding apparatus 12); a control device that receives job information, and moves and sets components arranged along the single sheet path so that the sheet is transported through the single sheet path in accordance with the folding mode after the job information is received, see for example (Fig. 1; via controlling means 14A and 14B receiving job information to control the whole device including the sheet path in accordance with the chosen/received folding mode 12).

Viens does not disclose that a folding mode selecting device causes the folding position changing mechanism to change a sheet folding position in accordance with a selected one of the

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folding mode. However, Viens discloses different folding mode as clearly shown in (Figs. 5A-8B; via folding station 12), but does not show the claimed “folding mode selecting device” as Viense select the mode manually (via the user).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens’s sheet folding machine by using a folding mode selecting device to replace the manual work of changing the folding mode, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Regarding claim 2: further comprising a control device which controls the sheet folding unit in accordance with a folding mode selected by the folding mode selecting device (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 4: wherein the sheet folding unit (12) comprises a plurality of folding mechanisms in a sheet path (Figs. 5A and 5B).

Regarding claim 5: wherein at least one of the folding mechanisms comprises a folding position changing mechanism which can change a sheet folding position (Figs. 5A; via adjustable stoop 74 and 86).

Regarding claim 6: wherein among the folding mechanisms an upstream folding mechanism comprises a skew correcting mechanism which applies skew correction on the sheet (Figs. 5A and 5e) via when the sheets stop by the adjustable stop 86 will cause the sheet to curve and fold as shown in Fig. 5e.

Regarding claim 7: wherein at least one of the folding mechanisms comprises a folding member which is disposed in a sheet path to nip-transport the sheet (Fig. 5A; via 80 and 90); a transport member (Fig. 5A; via in-feed device 42, 60, 62 and nip 76) which is disposed in the sheet path upstream from the folding member (80 and 90) to nip-transport the sheet; and a tip end guide member (via adjustable stop 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet.

Regarding claim 8: wherein the folding mechanism comprises a folding position changing mechanism which moves the tip end guide member (86) that is movable, to enable a sheet folding position to be changed (Fig. 5B).

Regarding claim 9: wherein in the folding mechanism (80 and 90) a skew correcting mechanism which applies skew correction on the sheet configured by the transport member which can perform nipping (via 76) and releasing operations, and the tip end guide member (86), see for example (Figs. 5A and 5e).

Regarding claim 10: wherein after tip end of the sheet butts against the tip end guide member (86), the skew correcting mechanism causes the transport member (76) to transport the sheet by a short distance to form a loop on a side of the tip end of the sheet (Fig. 5e) and thereafter causes the transport member to perform the releasing operation (Figs. 5A and 5e; via to allow the sheets to go through the folding mechanism 80 and 90).

Regarding claim 11: Viens discloses a feeding mechanism nips the sheet that has subjected to skew correction by the skew correcting mechanism, by the transport member (via nip 76) and feeds the sheet that has been subjected to skew correction to the folding member

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(Figs. 5A and 5e; via 80 and 90). Viens does not disclose that setting a transportation speed of the transport member to a speed, which is equal to or lower than a speed of the folding member.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's folding apparatus by setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member, as a matter of engineering design choice, since the examiner takes an official notice that having two different speed in same apparatus such as the feeding speed different than the folding speed is old, well known, and available in the art, in order to improve and avoid any jam in the folding apparatus.

Regarding claim 18: further comprising a sheet folding postprocessing apparatus (Fig. 5A; via 12) which applies a predetermined postprocess on a sheet that has been subjected to a folding process by the sheet folding apparatus, see for example (Figs. 1 and 5A).

Regarding claim 19: further comprising a control device which controls at least the sheet folding apparatus and the sheet folding postprocessing apparatus in accordance with a postprocessing mode applied on the sheet (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 20: wherein the control device houses a letter-folded sheet into a sheet accommodating device in the sheet folding apparatus, under conditions of performing a letter folding process on the sheet by the sheet folding apparatus (Figs. 2-4, 5A, and 5B).

Regarding claim 21: wherein the control device guides a folded sheet to the sheet folding postprocessing apparatus, under conditions of performing Z-folding (Fig. 2) other than letter folding on the sheet by the sheet folding apparatus (Fig. 5A).

Regarding claim 31: wherein the plurality of modes of folding include letter C-folding, letter Z-folding and size A3 Z-folding (Figs. 5B, 6B, and 7B).

Regarding claim 32: wherein the sheet folding unit includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a plurality of modes of folding can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A)

Regarding claim 33: Viens discloses the sheet folding unit which applies folding on a sheet as the sheet proceeds along a single sheet path (column 4, lines 61-64; via 12); includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a folding modes can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A);

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wherein one of a plurality of folding modes can be applied on the sheet as the sheet proceeds along a single path (Figs. 5A, 6A, 7A, 8A, and 9A).

Regarding claims 36 and 37: Viens discloses different sheet paths for different fold type. Viens does not disclose a mode switch to change the sheet path.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's sheet folding machine by using a folding mode selecting device with the use of mode switch to replace the manual work of changing the folding mode, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Response to Arguments

Applicant's arguments filed 10/30/2008 have been fully considered but they are not persuasive.

Applicant argues that the applied art of Viens does not disclose a control device that receives job information and moves and sets components arranged along the single sheet path so that the sheet is transported through the single sheet path in accordance with the folding mode after the job information is received. The examiner maintains that the applied art of Viens disclosed the amended claims, see for example (Fig. 1; via control devices 14A and 14B). Viens's control devices are receiving job information via input data, as a result controlling the transported sheets through the selected folding stations 12, after the job information been received, see for example (Figs. 5A-9A).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is 571-272-4470. The examiner can normally be reached on Tuesday - Friday from 9:00 AM to 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Sameh H. Tawfik/
Primary Examiner, Art Unit 3721